

## **REMARKS**

Claims 20-49 remain pending. In the present Office Action, claims 20-49 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hagersten et al., EP 0 817 073 A2 ("Hagersten") in view of Sharma et al., U.S. Patent No. 6,108,737 ("Sharma"). Applicants respectfully traverse this rejection and request reconsideration.

Applicants respectfully request clarification of the record. The present Office Action, page 2, item 3, states that claims 20-49 are rejected over Hagersten "in view of ." That is, the second reference is not identified. In the body of the rejection, the Office Action refers to Sharma et al. but does not use a patent number to identify the Sharma reference. There is no Sharma et al. reference listed on the PTO-892 form included with the Office Action. On the PTO-1449 forms returned with the Office Action, there are two Sharma et al. references (U.S. Patent No. 6,108,737 and U.S. Patent No. 6,085,263). Applicants have assumed that the Office Action meant 6,108,737 (as that is the reference that was used in the parent application and the citation appears to match). However, Applicants would appreciate clarification in the next Action.

Applicants respectfully submit that claims 20-49 recite combinations of features not taught or suggested in the cited art. For example, claim 20 recites a combination of features including: "the probe includes an indication which designates a receiving node to receive responses to the probe, and wherein the receiving node is the first node responsive to the transaction having a first type, and wherein the receiving node is the second node responsive to the transaction having a second type".

The Office Action asserts that Hagersten teaches the second node generates a probe at col. 18, lines 23-. In this section, Hagersten teaches a home agent determining which slave agents will receive a coherency demand based on the directory information maintained by the slave agents (Hagersten, col. 18, lines 23-27). The coherency demand is transmitted to the slaves, which always return their coherency replies to the requesting node (Hagersten, col. 18, line 45-col. 19, line 7). Thus, Hagersten teaches that a requesting node transmits a coherency request to the home node, the home node transmits

corresponding coherency demands to the slave nodes, the slave nodes transmit coherency replies to the requesting node, and the requesting node transmits a coherency completion to the home node. The same set of communications, from the same nodes to the same nodes, is always used (see, e.g., Hagersten Figs 4-5 and the discussion at Hagersten cols. 19-22). Specifically, it appears that the Office Action is equating coherency demands from the home nodes to probes in claim 20. Accordingly, the slave nodes coherency replies (which are replies to the coherency demands) would correspond to the responses to the probes. However, these coherency replies are always provided to the requesting node.

For the above stated reasons, Hagersten does not teach or suggest "the receiving node [of the probe responses] is the first node responsive to the transaction having a first type, and wherein the receiving node [of the probe responses] is the second node responsive to the transaction having a second type" as recited in claim 20. Sharma does not teach or suggest these features either, and thus the combination of Hagersten and Sharma does not teach or suggest the above highlighted features.

The Office Action alleges that Hagersten teaches the above highlighted features as a READ transaction (first type) and WRITE transaction (second type) at col. 7, lines 43-47. However, these teachings are: "A read operation causes a transfer of data from a source outside the initiator to a destination within the initiator. Conversely, a write operation causes transfer of data from a source within the initiator to a destination outside the initiator." These teachings are merely the basic definition of read and write operations. However, nothing in these teachings have anything to do with which node receives probe responses for probes that might be used to implement the read and write operations. Probes and probe responses are not even mentioned. Only the eventual destination of data that is affected by the operation is described in the cited section. The eventual destination of the data for a read/write operation has nothing to do with which agent receives coherency replies, as highlighted above.

The Office Action cites Sharma col. 16, lines 39-58 to allegedly teach an indication of a receiving node to receive responses to the probe. However, these teachings are: "Specifically, the FRdMod x command issued from the remote bus to the hierarchical switch includes fields that identify (i) the owner of the data item x, (ii) the source processor and (iii) the address (and thus the node) of the memory address x. The remote bus then appends a multicast-vector to the FRdMod x command and forwards it to the hierarchical switch, which atomically multicasts the command in accordance with the vector (Step 1110). In Step 1112, each processor receiving the multicasted command interprets it as either a probe of the appropriate type, as a marker or as an acknowledgment. That is, the owner of the data item x recognizes that it is the owner via the owner field of the FRdMod; in response to the command, the owner provides the data to the source processor by way of a FillMod x response. Likewise, those processors having copies of the data item recognize that an implicit Inval probe portion of the FRdMod is directed to them and they invalidate their appropriate cache entries. The source processor identifies itself via the source processor field of the FRdMod and thus interprets that probe as a FMod x marker." Accordingly, the owner always returns data to the source processor, and the processors having copies apparently do not reply to any processor in the cited section. Therefore, the node to which any reply is provided is always the source node in this section of Sharma.

For at least the above stated reasons, Applicants submit that claim 20 is patentable over the cited art. Claims 21-29, dependent from claim 20, are similarly patentable for at least the above stated reasons and recite additional combinations of features not taught or suggested in the cited art.

Claim 30 recites a combination of features including: "designating a receiving node for responses to the probe via an indication within the probe responsive to a type of the transaction, wherein the receiving node is the source node responsive to the transaction having a first type, and wherein the receiving node is the target node responsive to the transaction having a second type". The same teachings of Hagersten and Sharma highlighted above with regard to claim 20 are alleged to teach the above

highlighted features of claim 30. Applicants respectfully submit that Hagersten and Sharma do not teach or suggest the above highlighted features as well. Accordingly, claim 30 (and claims 31-33 dependent therefrom) are patentable over the cited art as well. Each of claims 31-33 recites additional combinations of features not taught or suggested in the cited art.

Claim 34 recites a combination of features including: "the probe includes an indication which designates a receiving node to receive responses to the probe, and wherein the receiving node is the first node responsive to the transaction having a first type, and wherein the receiving node is the second node responsive to the transaction having a second type". The same teachings of Hagersten and Sharma highlighted above with regard to claim 20 are alleged to teach the above highlighted features of claim 34. Applicants respectfully submit that Hagersten and Sharma do not teach or suggest the above highlighted features as well. Accordingly, claim 34 (and claims 35-39 dependent therefrom) are patentable over the cited art as well. Each of claims 35-39 recites additional combinations of features not taught or suggested in the cited art.

Claim 40 recites a combination of features including: "the second node is configured to generate a probe in response to the request, wherein the probe includes an indication which designates a receiving node to receive responses to the probe, and wherein the receiving node is the source node responsive to the transaction having a first type, and wherein the receiving node is the target node responsive to the transaction having a second type". The same teachings of Hagersten and Sharma highlighted above with regard to claim 20 are alleged to teach the above highlighted features of claim 40. Applicants respectfully submit that Hagersten and Sharma do not teach or suggest the above highlighted features as well. Accordingly, claim 10 (and claims 41-49 dependent therefrom) are patentable over the cited art as well. Each of claims 41-49 recites additional combinations of features not taught or suggested in the cited art.

### **CONCLUSION**

Applicants submit the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5500-39403/LJM.

Respectfully submitted,

/Lawrence J. Merkel/

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